STUDY OF INCOMMENSURATE PHASE OF K_2ZnCl_4 CRYSTALS UNDER UNIAXIAL STRESSES

V.Yo. Stadnyk[1], *Z.O. Kohut*[2], *R.S. Brezvin*[1], *V.M. Gaba*[2], *I.M. Matviishyn*[1]

[1]Ivan Franko Lviv National University
(*8, Kyrylo and Mefodii Str., Lviv 79005, Ukraine; e-mail: vasylstadnyk@ukr.net*),
[2]National University "Lviv Politechnika"
(*13, Bandera Str., Lviv 79066, Ukraine*)

S u m m a r y

The influence of uniaxial stresses applied along the main crystallophysical directions of K_2ZnCl_4 crystals on the temperature dependences of birefringence Δn_i and refractive indices n_i of the crystals in the range of their phase transitions that includes the incommensurate phase has been studied. Both parameters, Δn_i and n_i, were found to be sensitive to the action of the uniaxial pressure. Considerable pressure-induced shifts of phase transition points toward different temperature regions at the paraphase–incommensurate and incommensurate–commensurate ferroelectric phase transitions were observed. The displacements were found to depend on the uniaxial stress direction, which can be explained by the influence of the applied pressure on the structure of K_2ZnCl_4 crystals.